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The Transition of Atmospheric Infrared Sounder Total Ozone Products to Operations

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The National Aeronautics and Space Administration Short-term Prediction Research and Transition Center (NASA SPoRT) has transitioned a total column ozone product from the Atmospheric Infrared Sounder (AIRS) retrievals to the Weather Prediction Center and Ocean Prediction Center. The total column ozone product is used to diagnose regions of warm, dry, ozone-rich, stratospheric air capable of descending to the surface to create high-impact non-convective winds. Over the past year, forecasters have analyzed the Red, Green, Blue (RGB) Air Mass imagery in conjunction with the AIRS total column ozone to aid high wind forecasts. One of the limitations of the total ozone product is that it is difficult for forecasters to determine whether elevated ozone concentrations are related to stratospheric air or climatologically high values of ozone in certain regions. During the summer of 2013, SPoRT created an AIRS ozone anomaly product which calculates the percent of normal ozone based on a global stratospheric ozone mean climatology. With the knowledge that ozone values 125 percent of normal and greater typically represent stratospheric air; the anomaly product can be used with the total column ozone product to confirm regions of stratospheric air. This paper describes the generation of these products along with forecaster feedback concerning the use of the AIRS ozone products in conjunction with the RGB Air Mass product to access the utility and transition of the products.